THE TREATMENT OF THE CONGENITALLY UNFIT AND OF CONVICTS BY STERILIZATION.

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It is certain that the subject of Sterilization of the unfit is becoming of increasing interest. The fact that it has been for long in use in America and that it is now being considered by other countries, shews how much more seriously it is thought of as a means of permanently diminishing propagation. As evidence of this interest in London, I may mention that recently a Board of Guardians sent out a memorandum to all Guardians of England and Wales, asking their support to a resolution urging Parliament to consider seriously the urgent question of sterilization of the mentally unfit. In addition, there have been somewhat similar resolutions from public bodies.

In the first place, I should like to say that the word 'unfit,' when read in medical literature, is generally meant to convey that the individual is unsuitable as to behaviour and conduct for the every day duties of life, and carries with it the impression of mental deficiency. In this paper, I use the word as implying an individual who does not conform to the ordinary convenances of society, whether the acts be due to genuine mental weakness or to moral delinquency.

According to the last Annual Reports of the Board of Control for England and Wales, (1) and the General Board of Control for Scotland, there were 201,179 individuals mentally affected, and of these, 51,230 were mental defectives. (2)

During the four years 1921 to 1924, there were 143,326 males, and 41,219 female prisoners, some of these having been convicted from 1 to 5 times, from 6 to 10 times, from 11 to 20 times, and others actually over 20 times, as the accompanying table will shew.⁽³⁾

Abstract from Report of Commissioners of Prisons and Director of Convict Prisons for years ending 31st March, 1921, 1922, 1923, and 1924.

PARTICULARS.	1921	1922	1923	1924 Totals for 4 years.	
Total number of male prisoners	99 989	07 707	n# nnc	97 994	140 000
Total number Female	$32,869 \\ 11,043$	35,787 11,340	37,336 10,035	37,334 8,801	$143,326 \\ 40,419$
Previous Convictions	43,912	47,127	47,371	46, 135	183,745
Convicted 1 to 5 times: Males Females	11,681 3,361	13,292 3,666	14,550 3,004	$\begin{vmatrix} 14,508 \\ 2,391 \end{vmatrix}$	54,031 $12,422$
Convicted 6 to 10 times:	,			-	66,453
Males Females	$2,465 \\ 970$	2,873 1,129	3,134 1,120	3,694; 948	$12,166 \\ 4,167$
Convicted 11 to 20 times :					16,333
Males Females	$1,943 \\ 1,121$	2,101 1,416	2,352 1,186	$\begin{bmatrix} 2,608 \\ 1,033 \end{bmatrix}$	$9,004 \\ 4,756$
Convicted over 20 times:					13,760
Måles Females	$1,802 \\ 2,648$	2,140 2,860	$\begin{vmatrix} 2,082 \\ 3,127 \end{vmatrix}$	2,224 2,886	$8,258 \\ 11,521$
					19,779
Average annual charge per inmate	£121 7 10	113 7 2	85 19 0	85 12 3	

Total cost of prisoners per annum for 1921—£5,328,847 do. 1922—£5,339,881 16 4 do. 1923—£4,071,537 9 0 do. 1924—£3,947,732 13 9

Total for 4 years .. £18,687,998 19 1

From the tables of mental deficiency it is evident that it is increasing. The number of mentally deficient under statutory supervision on the 1st January 1925 was 13,547,—an increase of 2,722. In addition, there was a large increase in the number under voluntary supervision, the figure being 14,156, as compared with 6,744 in the previous year. (4)

From the reports of the Commissioners of Prisons, the number of prisoners, both male and female, averages 46,136 annually.

HEREDITY.

In this paper, I suggest a method of diminishing in the future, not only the mentally deficient, but the number of individuals in our prisons. It is therefore only right I should adduce such statistics as will prove it to be logically sound that such means of treatment ought to be adopted in the best interests of the State. It can be shewn that the main cause of this increasing number of the mentally affected is heredity, and that this also accounts for the large number of confirmed criminals.

In an interesting paper on the work of the special schools in London for mentally defective children, Mr. Arthur Hill states that the training aims at teaching habits of obedience and cleanliness, improving emotional stability, and making children employable; but he does not consider that "their final products are of eugenic value to the race." (5)

Dr. Goddard states that no less than two thirds of our feeble-mindedness is due to heredity. (6) From personal examination of more than 5000 prisoners, Dr. Paul Bowers has shewn that the antecedents of 44 per cent. of these convicts were psychopathic individuals who were either insane, feeble-minded, epileptic, criminal, or suffered with organic or functional disease of the nervous system. (7) Of course heredity and environment must be considered together, because, however excellent may be the hereditary tendencies in a child, the influence of a pernicious environment may be the cause of criminal conduct.

In the interesting presidential address of Dr. Ochsner, delivered before the American Surgical Association, advocating the sterilization of habitual criminals &c., he states that it has been proved by statistics collected in the State of Indiana, that 100 families have added more than one half to the crimes done to native born citizens during the past generation. The offspring of the respectable members of society are constantly exposed to the harmful influence of contact with these degenerate classes and their offspring. He also mentions that a noted criminal lawyer who has been active constantly in the criminal court of a great city for many year, states that he has many times encountered sons of criminals guilty of the identical crimes for which their fathers were prosecuted many years before. (8)

It is important in criminology to collect and classify the data. is true that environment and evil education have a marked effect in the production of criminals, but a large proportion of them have sprung from unsound parents. (9) Sichart gives the proportion of pathological inheritance as 36 per cent; Marro makes it 90 per cent. (10) Frequently vicious education and vicious heredity are combined in Of 104 criminals whose heredity was investiproducing criminals. gated, 71 shewed some hereditary influences. Marro investigated deaths by alcoholism, suicide, insanity and cerebral disease, and found that among 230 parents of criminals, these causes constituted 32.1 per cent., whilst in the case of the parents of normal persons they are only 16·1 per cent.,—almost exactly half. Sichart studied 3881 subjects in prison in Wurtemberg for theft, rape and fraud. parison with the general population he found that anomalies or crimes existed in the case of the parents of the various classes in the following proportions:-

> Thieves, 32 per cent; Incendiaries, 36·8 per cent; Sexual offenders, 38·7 per cent; Perjurers, 20·5 per cent; Swindlers, 23·6 per cent. (11)

In Dr. Barr's individual study of 4050 cases of imbecility, he found 2651, or 65.45 per cent. caused by malign heredities, and of these, 1030, or 25.43 per cent. were due to a direct inheritance of idiocy, and 280, or 6.91 per cent. to insanity.

The course of criminality commences early. In 37 cases out of 100, the first conviction took place under the age of 20; in many instances at 15 or 17 years of age, and even earlier. (13) In spite of the excellent work done for the Borstal lads, about 35 per cent. who have passed through the Borstal training have again come into conflict with the law. (14) Dr. Parkes Wilson said that in Pentonville about 100 persons a year were so far mentally deficient as to be quite unfit for prison discipline, and that, besides these, no less than 20 per cent. of the prisoners shew signs of mental inefficiency. Of 100 feeble-minded cenvicts, it is judged that only four might be discharged to the care of relatives, or unconditionally, with reasonable prospect of leading an honest life. (15)

Dr. Tredgold, from an exhaustive study of the antecedents of mental defectives, states that over 80 per cent. of the cases are con-

nected with neuropathic inheritance. (16)

It is apparently a simple explanation of the foregoing conditions to say that there must be some fault in the development of the brain. but it is extremely difficult to say what is the actual cerebral change occurring in the mentally deficient child or in the confirmed convict. Mental deficiency is associated with and proportional to the arrest of development of the supra granular layer of pyramidal cells of the cerebral cortex. (17) Normal development is undoubtedly dependent upon various parts of the organism being gradually formed in physiologically healthy relation to each other. It may be that the necessary stimuli for the development of certain parts of the brain may be inhibited, or that there may be too much stimulation, with the result that there may be an atrophic condition of the part affected, or the It may also be borne in mind in dealing with development, that the nutritive or atrophic relations existing between the different parts of the mass undergoing growth, is of the highest importance. may be pointed out that environmental changes acting upon the fertilised ovum, or upon the embryo, may produce an almost infinite variety of abnormal types, although, so far as is known, these modifications do not become hereditary. If the fertilised egg be placed in a centrifugal machine, the heavier particles are thrown to one side of the egg, and the entire substance of the egg becomes stratified into layers and zones, which may lead to serious changes in development. (18)

ENVIRONMENT.

It is interesting to note that in the 17th and 18th centuries, many philosophers taught that all men were born equal, and later, became unequal through unequal opportunities.

There can be no doubt about the influence of environment upon the young, both for good and for evil, and there are many who regard environment as the greatest contributory cause of crime, and who place heredity in a subordinate position. The environmental condi-

tions act on the mind through the medium of the nervous mechanism, and we are therefore able to trace innumerable modifications in the nervous system which may correspond to the growing adaptation to external relations. But the physical organism must possess certain fundamental capacities which determine its adaptability from birth. (19)

We can see, from what has already been said, that neither heredity nor environment should be considered alone, but that they must be combined in bringing up a child, for both are necessary to development, and the latter can often do much when the former is at fault. According to an interesting memoir on "The relative value of the factors which influence infant welfare"—a study of the data provided by the Medical Officers of Health of certain towns, leads to the conclusion that purely environmental factors are, as a whole, far less influential upon infant welfare than factors which are presumably inborn. (20)

A germ cell would remain the same if it were not for some external stimulant. Experiments on developing animals shew what may be relatively important, both as regards environment and heredity, and the modifications which may be produced by changes in environmental conditions.

From the foregoing, it is quite evident how great is the responsibility of heredity in producing mental defectives and criminals. But although this is readily accepted in the case of mental defectives, it is hard to make the vast majority of people grasp the connection between heredity and criminal offences; and yet we are certain, from the statistics already mentioned, that prisoners convicted more than twice are likely to be found guilty on future occasions, and that this conduct may be really due to a neuropathic strain.

It is right however, to point out that all mentally defective children are not the result of hereditary tendencies; they may originate from three additional sources:—

- (a) It may happen that the first born child of parents who may have an excellent mental and physical history, may have the brain injured, and become deficient mentally owing to some compression of the head by a slightly narrow pelvis, or to the use of forceps in delivery. We know from the post-mortem examination of infants what may take place in the way of intra-cranial haemorrhage, laceration, depression, and depressed fracture of the cranial bones. Statistics seem to prove however, that a long labour is more prone to interfere with mental development late in life than forceps extraction. (21)
- (b) A second source is, strangely enough, the last child delivered in a large family of otherwise perfectly normal infants. This is difficult to explain; it may have something to do with the exhaustion of a woman who has borne many children.
- (c) The third source is injury to the head in an infant who up to the moment of the accident has been perfectly bright and apparently intelligent. I need only refer to the mental weakness following specific fevers, or to an attack of encephalitis lethargica, for at present we do not know enough about the latter disease to predicate whether the condition may be permanent or pass off.

I have dwelt thus long upon heredity and environment because

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the former is the prime factor, in the vast majority of cases, of mentally deficient children and confirmed criminals.

TREATMENT.

Under this will be considered the best method, having regard to the future, of dealing with the mentally deficient and criminals. With reference to the former, this must be divided into the treatment of those mentally deficient by segregation and by sterilization.

With regard to segregation, it must be at once admitted that if it could be thoroughly and efficiently carried out, and if it could include all the mentally deficient, no treatment could be better. But we know that all mentally deficient individuals are not under control. There are many girls and boys who are quite well enough to be kept at home, and who can do a certain amount of housework with advantage to the parents. It is impossible to segregate these. For those who are bad enough, the best method of treatment is doubtless that which they receive at schools or colonies.

According to the Board of Control, large institutions are to be preferred, not only on the ground of economy in initial cost of maintenance, but also of efficient organisation and classification. the high grade mentally deficients who give rise to so much anxiety, not only on account of the future, but because of the harm they may If all could be segregated, it would obviously be a do to others. great advantage. We know that the mentally deficient are well cared for in the State institutions and certified houses, and there is of course, less likelihood of promiscuous intercourse, but according to the Report of 1924, there were many hundreds of urgent cases for which there were no vacancies in existing institutions. These will have to remain for long periods without the training, care, and protection they need. Lack of accommodation means degradation, crime, pauperism, and disease to individual defectives, with additional expense to the community. (22) Needless to say it is from the latter that, from the point of view of propagation, harm is apt to arise.

It is on account of the rapidity with which propagation occurs that this matter becomes so serious and increasingly urgent. They propagate from two to six times more rapidly than normal individuals. (23) The higher grades of feeble-minded persons (who are the most numerous and dangerous) tend to have very large families, as can be proved from the detailed records of 1000 cases. It is important, with reference to the above, to point out that after the infinite care and trouble exercised by the Royal Commission on the Care and Control of the Feeble-minded, one of the conclusions was that "In view of the evidence concerning fertility, the prevention of mentally deficient persons becoming parents would tend largely to diminish the number of such persons in the population."

According to the Royal Commission, the figures and statements support the opinion that during the years of procreation and child-bearing, there should be control and supervision in the case of mentally defective men or women. My contention is that at present, such control except by segregation, which is out of the question, is impos-

sible, and that the only method of diminishing propagation is by sterilization.

The operation of sterilization by modern methods is simple, and in no way interferes with the metabolism of the individual or with sexual feeling, so that there can be no shadow of doubt that it ought to be carried out on all the mentally deficient if we are really in earnest in endeavouring to lessen their numbers. The mere fact of sterilization would release large numbers from the necessity of segregation. My own view is that, should it not be done earlier, the limit of age be set down at 16, for if by then there be no evidence of such improvement as would lead to the belief that permanent benefit or cure could take place. it is in the highest degree improbable that there will be any hopeful When a child is mentally deficient and is pronounced by alienists to be beyond the prospect of recovery or improvement, then sterilization ought to be performed. Every possible care would be exercised before a decision is given, and that would only be arrived at after consultation with an alienist and the Medical Officer in charge of the patient. For those in institutions, these operations could be carried out by the Medical Officer in charge, or, if thought advisable. by a surgeon appointed to the Institution—whatever course would be the most economical.

Some who have had much experience in dealing with the mentally deficient, are of the opinion that sterilization would have but little effect in the prevention of mental deficiency, but, considering that it has never been tried in this country, and that they acknowledge the statement that over 80 per cent. of the cases are connected with neuropathic inheritance, one cannot accept such logic; for, given a mentally deficient individual, the descendant of a mentally deficient parent, it is in the highest degree improbable that the offspring will be anything but a mental defective.

I know it is advanced by some that when once sterilization took place, it would be an excuse for promiscuous intercourse, and that it would lead to the increase of venereal disease. I do not believe that anything of the kind would happen. Sterilization would make no difference as to promiscuous intercourse, which will always occur, no matter what is done to prevent it. The ideas of morality will not act as a deterrent, and if the gonococcus or sphirochaeta pallida should be present, such conditions cannot be put down to sterilization. In the event of either, sterilization would certainly prevent the birth of illegitimate syphilitic chidren, or of those who become blind from the gonococcus. In rescue work, about 27 per cent. of the cases received into the Rescue Home were decidedly deficient in moral responsibility and will power, and, to a marked degree, in mental capacity, and were unfit to be trusted without supervision. Certain points recorded seem to prove the fact that irresponsibility increases with $age^{(24)}$.

TREATMENT OF CRIMINALS.

I have already mentioned the percentage of neuropathic strain in the family histories of criminals, and that some of these prisoners have been convicted over 20 times. My strong opinion, and that of many others, is that such prisoners should be sterilized. I do not suggest for a moment that such treatment would have the smallest effect as a deterrent, although in the State of Nevada, the law is punitive. I believe that sterilization should be purely eugenical, but we should know that it would be the means of preventing a prisoner becoming the parent of any future child. This treatment however, wants careful consideration in the case of certain criminals, for it is obvious that it would be useless in confirmed old criminals, or in women past the child bearing age, who spend most of their time in gaol, for their time of propagation is over. But in the case of the young or middle aged criminal who had been convicted more than twice, it should be carried out.

Although we know that the operation is a simple one, and in no way interferes with the functions of the body, it would doubtless in time be looked upon as an added punishment, and although this might be an advantage, we know that it would probably have no effect in the suppression of crime.

In fifteen states of America experiments have been made with sterilization. Of these, nine are still in force, five have been declared unconstitutional, and one repealed. (25) In 1922 the law had been carried out in 3233 cases, of which 2558 had been operated on in the State of California. Dr. H. C. Sharp, who has applied vasectomy since 1899, says that he has had under his post-operative observation 236 of these cases, and has seen no unfavourable symptoms in any case. There has been no atrophy or cystic degeneration, and no disturbed mental or nervous conditions. (26).

Sterilization might be brought about by X rays, but it is possible that this may interfere with the functions of the interstitial cells. Dr. Martindale states that working under definite standard conditions in women, the dose of intensive X rays should be so accurate that amennorrhoea for a certain definite time, or permanently, should be guaranteed, but that with our present knowledge of the possible idiosyncracies of the patient, this is difficult. Needless to say that if X ray therapy can be relied upon, it would be an enormous benefit in the case of women who had to be sterilized permanently. (27)

Dr. Irvine, Physician to the Sing Sing prison, considers that criminal character depends in the first instance on heredity, and that it would be an economy and a great benefit if all habitual criminals were deprived of the power to produce offspring, and he would class crime as one of the preventable diseases. (28)

To ensure sterilization in the male, the operation of vasectomy is done, and in the female, division of the Fallopian tubes in a manner to render future imperviousness. It is unnecessary to describe these operations now, but it certainly is important that it should be generally known that there is nothing cruel about the operation itself, and under modern methods of operating, the danger is infinitesimal. Perhaps with the advance of science, some new method may be discovered which may be equally effective as vasectomy and salpingectomy.

It is of course obvious that to carry out sterilization in this country, legislation would be required, and therefore it is no part of this

paper to enter into the details now as to how it is to be effected. Suffice it to say that in the case of the mentally deficient, it would be done in each individual only after careful investigation. As regards prisoners, the matter would be simple, for it would follow immediately after the number of convictions, which would be finally decided upon after legislation had been passed.

COST TO THE STATE.

Now if the statistics I have collected be accepted, then it must be evident that sterilization would be the means not only of lessening the numbers of the mentally deficient, but would also in time, have a most salutary effect upon the number of convicts. This would diminish enormously the cost to the State, because the care and management of the mentally deficient, and of the housing and control of prisoners average together a very large annual sum. Any suggestion which, if adopted, would lessen this cost to the State would be gratefully accepted at the present time, when taxation is so excessive. The total expenditure on the upkeep of County and Borough Mental Hospitals in England and Wales, and on the maintenance, supervision and treatment of the patients in them during the financial year ending 31st March 1924, amounted to £6,953,804. In the case of prisoners for the year 1923 the cost was £4,071,537, so that, for this one year, the total cost came to £11,037,690. Surely such figures ought to stimulate all who take an interest in the welfare of our country to do everything in their power to lessen such enormous expenditure. so doing, they will be helping to increase the standard of health of the nation by lessening the number of the mentally deficient, and of the convicts in our prisons. We know that neither can ever be actually arrested at the source, but by doing our utmost to abolish prejudice and sentiment, to secure legislation for the elimination of the unsound, and to mitigate the incidence of both mental deficiency and crime, we shall be helping to build up a State composed of a people physically and morally healthy.

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- 2. Eleventh Annual Report of the Board of Control for Scotland.
- 3. Abstract from Report of Commissioners of Prisons and Directory of Convict Prisons for 1921, '22, '23 and '24.
- 4. Eleventh Annual Report of the Board of Control, Page 68.
- 5. Eugenics Review, April 1925.
- 6. International Cliniques, 1920, Page 160.
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